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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,425	04/19/2001	Frederic Bauchot	FR920000031US1	3575

			EXAMINER
7590	07/02/2004		STEVENS, ROBERT

David A. Mims, Jr.
IBM Corporation
Intellectual Property Law Dept.
11400 Burnet Road - Internal Zip 4054
Austin, TX 78758

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Office Action Summary	Application No.	Applicant(s)
		09/838,425	BAUCHOT ET AL.
		Examiner	Art Unit
		Robert M Stevens	2176

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 April 2001*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☒ Claim(s) *1 and 4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All   b)☐ Some *   c)☐ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-7 are pending in Application No. 09/838,425, entitled "Method and System in an Electronic Spreadsheet for Comparing Series of Cells", filed April 19, 2001, claiming benefit by virtue of foreign (French) application 00480059.5 filed with the European Patent Office on 7/13/2000.

2. No IDS has been filed as of the date of this communication.

3. Acknowledgement is made of a claim for foreign priority under 35 USC 119 (a)-(d) or (f).

Drawings

4. New corrected drawings are required in this application because drawings do not conform to the margin specifications set forth in 37 CFR 1.84(g). Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 260a and 260b.

6.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: 260.

7.   The algorithms presented in Fig. 5 and 6 appear to be technically incorrect (initializing the same variable multiple times [see steps 505/506 and 605/607], and resulting in an error condition [see step 515, which cannot process the only possible scenario: "True/False/False/False"]).

8.   Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

9.   Applicant is reminded of the proper language and format for an abstract of the
disclosure.

The abstract should be in narrative form and generally limited to a single
paragraph on a separate sheet within the range of 50 to 150 words. It is important that
the abstract not exceed 150 words in length since the space provided for the abstract
on the computer tape used by the printer is limited. The form and legal phraseology
often used in patent claims, such as "means" and "said," should be avoided. The
abstract should describe the disclosure sufficiently to assist readers in deciding whether
there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information
given in the title. It should avoid using phrases which can be implied, such as, "The
disclosure concerns," "The disclosure defined by this invention," "The disclosure
describes," etc.

10.   The abstract of the disclosure is objected to because: (1) it is not limited to one
paragraph; (2) it is longer than 150 words; (3) it spans more than one page; and (4) it
merely reiterates the claims. Correction is required. See MPEP § 608.01(b).

11.   The disclosure is objected to because of the following informalities:

  a.   Page 2 line 28: The term "convex" as it applies to a set of cells is not

         defined;

  b.   Page 4 line 28: "relies" should be "rely". Please correct all

         spelling/grammatical/etc. issues throughout the specification;

  c.   Page 8 lines 9-23 allude to a problem, which was not made readily

         apparent. Please explain;

  d.   Page 17 line 11 "261b" should be "261a";

  e.   Page 18 line 16: The term "connex" as it applies to a set of cells is not

         defined; and

  f.   Page 27 lines 18+: depict a table showing a matrix of potential comparison

         results, however, this table's meaning is unclear. Please clarify.

Appropriate correction is required.

12.   **All** non-patent literature relied upon for background information and cited

throughout the specification (some examples include references found on page 3 lines

3-5, and on page 14 line 30 continuing onto page 15 line 4) needs to be submitted via

an IDS or as an appendix to the specification.

Claim Objections

13.   Claims 1 and 4 are objected to because of the following informalities: the last

limitation should be preceded by "and".

Claim Rejections - 35 USC § 101

14.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

15.   **Claims 1-6 are rejected under 35 U.S.C. 101** because the claimed invention is

directed to non-statutory subject matter.

Claims 1-5 are directed to subject matter that is not tangibly embodied. The

claims read on a mental process that could be carried out using paper and pencil. At

best, the claimed invention reads on a computer program per se. Therefore, the

claimed invention is directed to subject matter that is not within the technological arts.

Claim 6 is directed to a software program, per se, not tangibly embodied in a

computer readable medium.

16.   **Claims 1-7 are rejected under 35 U.S.C. 101** because the claimed invention

lacks patentable utility. The invention as claimed produces no useful, concrete and

tangible result.

Claim Rejections - 35 USC § 112

17.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

18.   **Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph**, as failing to

comply with the enablement requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the

invention.

     Regarding claim 1, the preferred embodiment discloses a technically incorrect

solution. According to the procedure disclosed in Fig. 5, the resultant values for

Atrue/Afalse/Btrue/Bfalse are <u>ALWAYS</u> True/False/False/False. There is no such

possible processing option for step # 515!

     Translated into claim 1 limitations: "determining a first operation ..." is <u>always</u>

true (Fig 5, step 506), "determining a second operation ..." is <u>always</u> false (Fig 5, step

511), and "determining whether the first series ..." is <u>always</u> True/False/False/False,

resulting in an impossible scenario, according to Fig 5 step 515.

     Claims 2-5 are rejected by virtue of their dependency upon claim 1.

     Claims 6-7 claim the system and computer readable medium subject matter

forms that embody claim 1, and therefore are rejected under the same rationale as per

claim 1.

19.   **Claim 6 is also rejected under 35 U.S.C. 112, first paragraph** as a single

means claim of undue breadth. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195,

197 (Fed. Cir. 1983)

20.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

21.   **Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph,** as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

   Regarding claim 1, there are two limitations that are identical ("Assigning the

first value ... first series of cells"), making it unclear what Applicant is claiming.

   Claims 2-5 are rejected by virtue of their dependency upon claim 1.

   Claims 6-7 are system and computer readable medium subject matter forms,

which embody claim 1, and therefore are rejected under the same rationale as per claim

1.

   Also in regards to claim 4, the last line of the claim states that the "second

series is included in the second series." This is vague and ambiguous. For

examination purposes, the Office will treat that phrase to read "second series is

included in the first series."

Claim Rejections - 35 USC § 103

22.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

23.   **Claims 1-7 are rejected under 35 U.S.C. 103(a)** as being unpatentable over the

Aaron T. Blood authored spreadsheet entitled "equal_val", (downloaded from www.xl-

logic.com/pages/formulas.html, published August 10, 1999, and hereafter referred to as

"Blood") in view of Kris Jamsa et. al., <u>Jamsa's C/C++ Programmer's Bible: The Ultimate</u>

<u>Guide to C/C++ Programming</u>, Jamsa Press, (c) 1998, sections 87-106, 1161-1161 and

1228-1229 (hereafter "Jamsa").

24.   **Regarding independent method claim 1**, Blood discloses

> *A method of comparing two series of cells in a multi dimensional*
> *spreadsheet comprising a plurality of cells identified by a cell address along each*
> *dimension, a series of cells comprising one or a plurality of cell range, a cell*
> *range comprising one or a plurality of cells, said method comprising the steps of:*

> ** assigning the first value of said boolean attribute to each cell of a*
> *first series of cells;* (screen capture 3, cells B3-L3)

> ** assigning the second value of said boolean attribute to each cell*
> *of a second series of cells;* (screen capture 3, cells B6-L6)

> ** determining in a first operation whether all the cells of said first*
> *series of cells share the same first value of said boolean attribute, share*
> *the same second value of said boolean attribute or do not share a same*
> *single value of said boolean attribute;* (screen capture 4A, cell M3 =

TRUE, because all first series cells [B3-L3] share the same first value of
"1")

*assigning the first value of said boolean attribute to each cell of
the first series of cells; (screen capture 3, cells B3-L3)

*determining in a second operation whether all the cells of the
second series of cells share the same first value of said boolean attribute,
or share the same second value of said boolean attribute or do not share
a same single value of said boolean attribute; (screen capture 5A, cell M6
= TRUE, because all first series cells [B6-L6] share the same first value of
"0")

Blood, however, does not explicitly disclose:

*defining a boolean attribute, said boolean attribute having a first
and a second value;

Jamsa, though, discloses this limitation in section 98, "Understanding How C

Represents True and False." Refer in particular to the first paragraph and the ensuing

first line of code, "if (1)".

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Jamsa for the benefit of Blood because to do so

would allow for the processing of one set of instructions if a condition were true and,

possibly, another set of instructions if the condition were false as taught by Jamsa in the

first paragraph under section 98, "Understanding How C Represents True and False."

Blood, also, does not explicitly disclose:

*determining whether the first series and the second series are the
same or not by comparing results of the first operation and the second
operation:

> ** if all the cells of the first series share the same second
> value of said boolean attribute in said first operation and all the
> cells of the second series share the same first value of said
> boolean attribute in said second operation, the first series and the
> second series are the same.*

Jamsa, though, discloses this limitation in section 88, "Understanding a Bitwise

Exclusive OR Operation." Refer in particular to Table 89, which illustrates that identical

values in a first series (X) and a second series (Y) result in the value "0" when subjected

to an exclusive OR operation.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Jamsa for the benefit of Blood because to do so

would provide a programmer with a mechanism to distinguish between variables having

equal values (such as X and Y both equal to 0 or 1) and unequal values (only one of X

and Y equal to 0) as taught by Jamsa in Table 89 under section 89, "Understanding

How C Represents True and False."

Regarding claim 2, which is dependent upon claim 1, Blood does not explicitly

disclose:

> *wherein the step of determining whether the first series and the second
> series are the same or not comprises the further step of determining whether the
> first series and the second series are disjoined or not the first operation and the
> by comparing the results of second operation:*

> ** if all the cells of the first series share the same first value of said
> boolean attribute in said first operation and if all the cells of the second
> series share the same second value of said boolean attribute in said
> second operation, the first series and the second series are disjoined.*

Jamsa discloses this limitation in section 89 entitled "Understanding a Bitwise

Exclusive OR Operation", particularly in Table 89, which displays the results of an

exclusive OR (XOR) operation. The concept claimed is that of mutually exclusive

(disjoined) data sets. As shown in Table 89, the XOR operation results in a value of 1

indicating that compared values are not equal. Thus all 1's indicate that two sets of

values are disjoined (or mutually exclusive). Note that by subsequently applying the

bitwise inverse operator (see Jamsa section 90), a programmer can reverse the

resulting logic and make 0 be the indicator of inequality between two values.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Jamsa for the benefit of Blood because to do so

would provide a programmer with a mechanism to distinguish between variables having

equal values (such as X and Y both equal to 0 or 1) and unequal values (only one of X

and Y equal to 0) as taught by Jamsa in Table 89 under section 89, "Understanding

How C Represents True and False."

Regarding claim 3, which is dependent upon claim 2, Blood does not explicitly

disclose:

> *wherein the step of determining whether the first series and the second*
> *series are the same or not, comprises the further step of determining whether the*
> *first series and the second series overlap or not by comparing the results of the*
> *first operation and the second operation:*

>> ** if all the cells of the first series do not share the same single value*
>> *of said boolean attribute in said first operation and if all the cells of the*
>> *second series do not share the same single value of said boolean attribute*
>> *in said second operation, the first series and the second series overlap.*

Jamsa discloses this limitation in section 89 entitled "Understanding a Bitwise

Exclusive OR Operation", particularly in Table 89, which displays the results of an

exclusive OR (XOR) operation. The concept claimed is that of intersecting

(overlapping) data sets. As shown in Table 89, the XOR operation results in a value of

0 or 1, indicating that compared values are equal or not, respectively. Thus a mixture of

1's and 0's indicate that two sets of values overlap (or intersect).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Jamsa for the benefit of Blood because to do so

would provide a programmer with a mechanism to distinguish between variables having

equal values (such as X and Y both equal to 0 or 1) and unequal values (only one of X

and Y equal to 0) as taught by Jamsa in Table 89 under section 89, "Understanding

How C Represents True and False."

Regarding claim 4, which is dependent upon claim 3, Blood does not explicitly

disclose:

> *wherein the step of determining whether the first series and the second*
> *series are the same or not, comprises the further step of determining whether the*
> *first series and the second series are included one in the other or not by*
> *comparing the results of the first operation and the second operation:*
>
>> ** if all the cells of the first series share the same second value of*
>> *said boolean attribute in said first operation and all the cells of the second*
>> *series do not share the same single value of said boolean attribute in said*
>> *second operation, the first series is included in the second series;*

> ** if all the cells of the first series do not share the same single value of said boolean attribute said first operation and all the cells of the second series share the same first value of said boolean attribute in said second operation, the second series is included in the ~~second~~ [first] series;*

Jamsa discloses these limitations in section 89 entitled "Understanding a Bitwise Exclusive OR Operation", particularly in Table 89, which displays the results of an exclusive OR (XOR) operation.

The concept claimed in the first limitation is that of containment (first series is a subset of second series). As shown in Table 89, the XOR operation results in a value of 0 indicating that compared values are equal and 1 indicating that compared values are not equal. If all values are 0 for the comparison of the first series to a portion of the second series, then the first series is contained (included) in the second series. Note that an unstated presumption in this claim is that the first series has fewer values than the second series. (If more first than second values, then first cannot be "included" in second series, and if an equal number of first and second values, then first may also be equal to second [see rejection of claim 1, above, which applies the Jamsa XOR teachings]).

The concept claimed in the second limitation is also that of containment (second series is a subset of first series). As shown in Table 89, the XOR operation results in a value of 0 indicating that compared values are equal and 1 indicating that compared values are not equal. If all values are 0 for the comparison of the second series to a portion of the first series, then the second series is contained (included) in the first series. Note that an unstated presumption in this claim is that the second series has fewer values than the first series. (If more second than first series values, then second

cannot be "included" in first series, and if an equal number of second and first values,

then second may also be equal to first [see rejection of claim 1, above, which applies

the Jamsa XOR teachings]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Jamsa for the benefit of Blood because to do so

would provide a programmer with a mechanism to distinguish between variables having

equal values (such as X and Y both equal to 0 or 1) and unequal values (only one of X

and Y equal to 0) as taught by Jamsa in Table 89 under section 89, "Understanding

How C Represents True and False."

Regarding claim 5, which is dependent upon claim 1, Blood does not explicitly

disclose:

> wherein said boolean attribute is temporary.

Jamsa discloses this limitation in section 1162 entitled "Using the BOOL Data

Type", particularly in the section code section in which the temporary bool variable "val"

is defined. This variable is temporary in that its scope is limited to the main() function,

and may be temporarily overridden by a like-named variable local to a function called by

main(), such as "func()".

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Jamsa for the benefit of Blood because to do so

would provide a programmer with the ability to convert an integer to a boolean value as

taught by Jamsa in last paragraph under section 1162, "Using the BOOL Data Type."

Regarding independent claim 6:

A system comprising means adapted for carrying out the method according to claim 1.

Claim 6 is substantially similar to independent method claim 1, and thus is

likewise rejected.

Regarding independent claim 7:

A computer readable medium comprising instructions adapted for carrying out the method according to claim 1.

Claim 7 is substantially similar to independent method claim 1, and thus is

likewise rejected.

Conclusion

25.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Non-patent Literature

"Formulas and Logic Downloads", www.xl-logic.com/pages/formulas.html, downloaded by Examiner on 6/17/2004.
        Blood, Aaron T., "cond_sum_array SpreadSheet", Jan 6, 1999 (www.XL-Logic.com).
        Blood, Aaron T., "option_box SpreadSheet", Jul 16, 1999 (www.XL-Logic.com).

Blood, Aaron T., "same_or_diff SpreadSheet", Sep 1, 1999 (www.XL-Logic.com).

Blood, Aaron T., "sum_between_switches SpreadSheet", Sep 3, 1999 (www.XL-Logic.com).

Blood, Aaron T., "sum_if SpreadSheet", Aug 19, 1999 (www.XL-Logic.com).

Deitel et al., JAVA: How To Program, 2nd Edition, Prentice Hall, Upper Saddle River, NJ, pp. 955-975 (©1998).

Gold et al., The Complete Idiot's Guide to Microsoft Excel 97, 2nd Edition, Que Corporation, Que Corporation, pp. 53-62 (©1998).

Granel, Vincent, "The Xxl Spreadsheet Project", Linux Journal, vol. 1999, issue 60es (April 1999), ISSN: 1075-3583.
(http://delivery.acm.org/10.1145/330000/327756/a27-linux_journal_staff.html?key1=327756&key2=5612137801&coll=ACM&dl=ACM&CFID=22784040&CFTOKEN=16685440).

Isakowitz et al., "Toward a Logical/Physical Theory of Spreadsheet Modeling", ACM Transactions on Information Systems, Vol. 13, No. 1, Jan. 1995, pp. 1-37 (ACM 1046-8188/95/0100-0001)

Microsoft Press Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997, pp. 126 and 299.

"Spreadsheet Programming: The New Paradigm in Rapid Application Development", Knowledge Dynamics, Inc., © 2002 (www.KnowledgeDynamics.com)

US Patent Application Publications

Prateley et al	US2001/0049699
Gelfand	US2002/0038303

US Patents

Koss	5,231,577
Young et al	5,280,575
Yarnell et al	5,359,729
Greif et al	5,371,675
Ammikrato et al	5,499,180
Narayanan	5,598,519
Chi et al	6,496,832

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Robert M Stevens whose telephone number is (703)

605-4367. The examiner can normally be reached on M-F 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph Feild can be reached on (703) 305-9792. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Robert M. Stevens
Art Unit 2176
Date: June 18, 2004

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER

rms